

A new species of *Lepidochrysops* Hedicke (Lepidoptera: Lycaenidae) from the North Western Cape

By C. G. C. DICKSON

This Lycaenid belongs to the *L. methymna* (Trimen) group and it bears some general resemblance to *L. bacchus* Riley. The forewings are not acute at the apex and the hindwings are rather elongated, the upperside has a decidedly bronzy tone and the greyish underside is distinctively marked in certain respects.

Lepidochrysops penningtoni spec. nov.

Male. Upperside.

Both fore- and hind-wings, bronzy-brown, with some dark coloration at the bases and (especially in the forewing) darkening a little towards the distal margins, which are edged with black. Cilia greyish to blackish-brown with white spaces.

Forewing. A small dark-brown marking, not sharply defined and in some specimens barely visible, at end of cell. Outer portion of cilia continuously greyish or dark-brown except near apex, with most of the white spaces enclosed by the dark colouring.

Hindwing. A more or less elongated (round in one paratype) black spot in area 2 near wing-margin, with some slight white scaling inferiorly and surrounded by slightly lighter colouring than that of the general background; a very faint trace of other, smaller, markings in some of the remaining areas in some specimens, including the holotype. Inner-marginal area greyish (distally somewhat brown), with a rather shiny surface. Cilia practically as in forewing but, to some extent, tipped with white.

Underside.

Forewing. Ground-colour brownish-grey. A white-edged, blackish-brown lunulate marking at end of cell and a postmedian series of nearly round markings, very dark brown and also edged with white scaling. (In two of the paratypes these markings are less distinct or only partially developed.) Postmedian spots six in number (but the lowest one, in area 1b, occasionally doubled). Lowest spot a little nearer distal margin than the one above it in area 2—but those in 2-6 forming a fairly even curve approximately equi-distant from distal margin. A submarginal series of markings a little darker than the ground-colour, in areas 1b-6, with irregular whitish edgings which, on the inner side, are roughly chevron-shaped. In at least one of the paratypes, these markings are barely apparent. A marginal series of prominent, detached white chevrons in areas 1b-6 with their apices touching the white spaces in the cilia: two in area 1b, the lower one much reduced and hardly in the form of a chevron. Cilia almost as on the upperside.

Hindwing. Ground-colour much as in forewing, but with scattered white scaling in places, within the basal half of the wing. The dark or darker markings edged to a variable degree with white. A black or nearly black streak edging vein 8 near its base (indistinct in some specimens); a black spot, variable in size (and very small in one of the paratypes) close to innermargin, sub-basally; a small and often very ill-defined dark spot in area 1c (in two of the paratypes enlarged and prominent), sub-basally;

a prominent black spot (in the holotype, with an abnormal inward projection) in cell above the foregoing spot; and a prominent spot immediately below vein 8, sub-basally. Black or nearly black lunule at the end of cell, large. Lowest marking of median series black or nearly so, more or less oval and well basad of the following, 2nd marking; 2nd-7th markings brown to dark-brown, varying in size and shape but as a whole more uniform in size and forming a more even curve than in most of the allied species; 8th marking in the form of a well detached black spot in area 7, close to costa and considerably more basad than the preceding marking. The median series strongly but sinuately curved, the evenness of the curve being broken by the relatively more inward placing of the markings in areas 2 and 3. (In one of the paratypes the discal markings are largely malformed.) White chevrons distad of the median markings prominent and the contour of the series as a whole similar, but the chevrons losing their form at the lower end of the series. The space adjoining and on the distal side of these chevrons darker than the general ground-colour of the wing. Submarginal rings variable in outline and the rings losing their shape at each end of the series. A black spot in area 2 partly covered by pale metallic-blue scaling, with dull orange replacing the white of the encircling ring, above it. Outer portion of submarginal rings corresponding to the chevrons in the forewing and also in contact with the white spaces in the cilia. Cilia as in forewing but tipped slightly with white in places.

Length of forewing (including cilia): 14-16.25 mm. (15.75 mm., in holotype).

Head black with some greyish to white hairs and scales between antennae and, between black ones, frontally. Eyes black, edged with white scales. Palpi black above with white scales (including hair-like scales) on sides and beneath (the white not extending as far down on the whole on outer side); the palpi mainly, and broadly, black-fringed along their outer lower length; terminal joint mainly black (partly white beneath). Antennae black, ringed with white at the joints; the club largely black but orange-brown along lower inner portion up to extremity, and the lower outer portion white, with white scales curving up on the outer side just short of the extremity. Thorax and abdomen black above, the former, especially, with light-brown to greyish hairs and with brownish scales as well as some similarly coloured hairs also present on part of the abdomen; beneath with silvery-white scales and hairs (largely grey on thorax), and the legs extensively scaled with white.

Female. Upperside.

Similar to that of male, allowing for marked lightening of colouring owing to the age of the female-allotype. Cilia of both wings with the white spaces more conspicuous than in the male.

Underside.

Again, presumably due to the age of the specimen, the general ground-colour of a faded tone—i.e., light-brown without any grey tint.

Forewing. The darker markings for the most part clear against their background, but with less contrast towards the innermargin. Cilia as in the male.

Hindwing. Very much as in the male. A considerable amount of white scaling over much of the basal half of the wing. The dark sub-basal spot in area 1a hardly discernible in one wing and, apparently due to loss of

scaling, indistinct (though presumably originally large) in the other wing; that in area 1c very small in one wing and even smaller, and barely visible in the other wing. Cilia like those of male.

Length of forewing (allotype): 17.25 mm. (exp.—as set: 33 mm.).

The allotype has lost its antennae and abdomen and the underside of the thorax seems to have been affected by rubbing or pressure.

♂ Holotype, WESTERN CAPE PROVINCE (Little Namaqualand): Steinkopf, 15.ix.1968 (Mrs. R. J. Southey); specimen to be presented by Mrs. Southey to the Transvaal Museum.

♀ Allotype, "CAPE. Namaqualand. Between Spectakel & Steenbok's Fontein. Aug., 1873. R. Trimen"; British Museum Reg. No. Rh. 17104.

Paratype presented by Mrs. Southey to British Museum (N.H.), data as holotype, 1 ♂ (R.J.S.).

Paratypes in Coll. K. M. Pennington, as holotype, 16.ix.1968, 2 ♂♂ (K.M.P.); 25.ix.1967, 2 ♂♂ (Mrs. K. M. Pennington).

Paratype in Coll. R. J. Southey, as holotype, 1 ♂.

The final part of Trimen's statement at the top of p. 29 of Vol. II of "South African Butterflies" (1887) concerning what were regarded as variations of *L. methymna* refers presumably to the present Namaqualand female specimen, while the actual locality is given on the same page as "Spectakel, Namaqualand". A label below the locality label on this specimen is inscribed: "Ex Trimen Coll. p. 171 [or 178?] No. 29". The specimen is also referred to in some detail by Dr. C. B. Cottrell in "Mem. ent. Soc. S. Afr.", No. 9, pp. 77-78 (June, 1965). The difference in size between Trimen's female and the largest male specimen of *L. penningtoni* of the present series is greater than would have been expected in a *Lepidochrysops* of this group, but the very close resemblance in other respects (apart from fading in the early specimen) seems to indicate that this female is conspecific with the male specimens.

The species can be distinguished from *L. bacchus* by its larger average size and the somewhat richer bronzy tone of the upperside and, on the underside (amongst other features in both fore- and hind-wings), by the more regular size of the discal markings of the hindwings (and more even conformation of the series as a whole), while the black spot near the tornus is surmounted by dull orange as against the white scaling in *bacchus*.

L. penningtoni is perhaps still closer to another, Western Cape, species which is being described by Mr. Pennington, which, however, has a brighter-coloured upperside in combination with a distinct difference in some of the underside markings. The present insect also has certain features in common with the larger and, on the upperside, darker *L. badhami* van Son, including the form of the discal series of markings on the underside of the wings.

The genitalia of one of the male paratypes are figured in the accompanying plate. It should be noted that the right valve (left side of figure) had its distal end turned downward somewhat in the slide. Most of the details of the genitalia are apparent from the figure. Falces very broad up to the main bend. Valves relatively slender (one broader than the other), the small inner projection of the bifurcate basal portion fairly close to the actual basal extremity; varying in breadth but without an abrupt widening near distal end, before final constriction and hooked extremity. Aedeagus with the tubular portion about three-fifths of the total length.

There are detail differences in the genitalia in comparison with those of *L. bacchus* and other allied species which have been examined.

The genitalia of most of the species of the *L. methymna* group have been studied exhaustively by Dr. C. B. Cottrell (*op. cit.*). A number of the species have also been dealt with from this aspect by the late Rev. D. P. Murray in "Anns. S. Afr. Museum", Vol. XLIII, Pt. 2 (Dec., 1956).

This butterfly is named with pleasure after my friend Mr. K. M. Pennington, who has made so many notable discoveries in the course of his life-long study of the butterflies of Southern Africa. Mr. Pennington has written as follows concerning this insect:—

"On 25th September 1967, we stopped at a large patch of mauve *Mesembrianthium* on west side of road five miles from Steinkopf on the tarred highway to Viool's Drift on the Orange River. My brother and I covered the whole area of twenty acres, while my wife worked the roadside. We collected for an hour. *P. chrysantas* (Trim.) was fresh on the flowers, a small *Aloeides* was rare and shy, and *S. nanus* (Trim.) was not uncommon. But the prize fell to my wife, who caught two rather worn specimens of a new *Lepidochrysops*, which she saw flying slowly among the scrub. We all pressed on to the Drift, where our target was *Colotis doubledayi* (Hopff.), and found it commonly in a steep dry valley three miles south of the bridge into S.W. Africa. Rushing back in the early afternoon for more of the *Lepidochrysops*, we found a wind had driven them to shelter, and an hour of concentrated hunting produced no more specimens. On our way back from Port Nolloth four days later, there was a cold south wind blowing clouds up, and no further collecting was possible.

"I returned to the spot on September 15th and 16th, 1968. The veld was not as advanced as the previous year, but about midday I spotted a fresh *Lepidochrysops*, which disappeared in the breeze. My wife and Mrs. Ruth Southey joined me from the car, and by 2 p.m. the latter had the good fortune to catch three fine males, while I missed another. Next day I caught two more good males, and missed a third.

"The country is flat, stony, and well covered with a variety of low plants. But the seemingly inevitable wind freshens towards midday, and all species stop flying. There was nothing distinctive about the vegetation, and all seven males were taken within an area of four or five acres. I searched six or seven square miles of the surrounding flat country without results. But I feel sure there must be many other spots in that part of Namaqualand where this dull brown inconspicuous Lycaenid exists. The altitude is just over 2,000 feet".

The manuscript of this paper has been read by Mr. Pennington before its publication. Mr. J. P. Doncaster, Keeper of Entomology, British Museum (Natural History), most obligingly consented to Trimen's early specimen being sent on loan to the writer, and thanks are due to Mr. G. E. Tite of the same institution for his kind help in this connection.

"Blencathra", Cambridge Avenue, St. Michael's Estate, Cape Town.

READERS will hear with regret that our late Treasurer, Mr. Leonard Parmenter, died on 4th March. A suitable obituary notice will be published as soon as possible.